Aloha-Reedville Transportation Action
Addressing Sidewalk Gaps Near Schools

Issue
The Aloha-Reedville study area includes 12 public schools split between the Beaverton and Hillsboro School Districts. An initial analysis using ¼ mile buffers around these schools identified more than nine (9) miles of sidewalk gaps.

Sidewalk connectivity was one of the most frequently cited concerns from the community. Based on additional discussion with the community and the Citizens Advisory Committee (CAC) sidewalk gap infill around schools was determined to be the highest priority.

A comprehensive inventory of sidewalk and connectivity gaps within ¼ mile of elementary schools and within ½ mile of middle and high schools resulted in an initial list of 99 potential projects. This list was reduced to 39 projects after eliminating funded projects, major road reconstruction projects, and projects on private property or in non-county road rights-of-way. List refinement also included close collaboration with school district staff, including a review of existing walk routes, busing areas and parent/guardian comments.

A final round of prioritization used geographic analysis to determine which project or set of projects would provide the most benefit for each school, as measured by the number of housing units whose occupants would theoretically use the facility on their walking route to school. Fifteen (15) projects were identified through this process and vetted again with school district staff. The projects include 11 sidewalk/walkway projects, three crosswalks project and one pedestrian/bicycle bridge totaling approximately $4.2 million and benefitting ten schools.

Intent moving forward is to identify and seek funding for these projects. Funding the pedestrian/bicycle bridge will likely be a stand-alone effort. Funding the remaining 14 projects may be accomplished by bundling them into one or more “packages” for federal, state or other grant opportunities. County funding such as the Minor Betterments program and the Urban Road Maintenance District may be considered for grant leverage and for locally-funded investments.

Recommendation
1. Seek funding and construct concrete sidewalks or asphalt walkways in the following locations to provide improved walking access to schools in Aloha-Reedville:
   a. 188th Avenue, Blanton Street to Kinnaman Road (side to be determined)
   b. South side of Rosa Road, Address #18811 to 183rd Avenue
   c. South side of Florence Street, 175th Avenue to 170th Avenue
   d. East side of 175th Avenue, Blanton Street to Florence Street
   e. East side of Miller Hill Road, Wagner Lane to Georgene Lane
f. 216th Avenue, Rock Road to Peggy Court (side to be determined)
g. East side of 180th Avenue, Vincent Street to Kinnaman Road
h. West side of 193rd Avenue, Blanton Street to Kinnaman Elementary School
i. South side of Blanton Street, 193rd Avenue to 185th Avenue
j. East side of 179th Avenue, Farmington Road to Ivy Glen Drive
k. Johnson Street, 209th Avenue to 198th Avenue (side to be determined)

2. Install marked crosswalks and supporting infrastructure as deemed appropriate through engineering analysis at the following intersections:
   a. Kinnaman Road at 188th Avenue
   b. 173rd Avenue and Florence Street
   c. Kinnaman Road at 202nd Avenue

3. Seek funding, design and construct a pedestrian/bicycle bridge and trail across Beaverton Creek along the Augusta Lane alignment between 178th Avenue and Pheasant Drive.

4. Maintain the list of unselected sidewalk/connectivity project candidates (included in the Background section of this issue paper) for the purposes of future project development.

**Performance Indicator**

Increase in linear feet of sidewalks or interim walkways within ¼ mile walking distance of elementary schools and ½ mile walking distance of middle and high schools.

**Lead Agency or Organization**

Washington County is the lead agency to take responsibility for this action. Partnering agencies or organizations could include:
- Beaverton School District
- Hillsboro School District
- Metro
- Tualatin Hills Park & Recreation District

**Background**

Many of the older neighborhoods in Aloha-Reedville were built prior to 1970 and retain a rural residential character. Few of these areas have sidewalks and other amenities found in newer neighborhoods. While some developers may have provided sidewalks voluntarily in certain developments, sidewalks were not a condition of development approval until the 1980s. Washington County has incrementally retrofitted sidewalks and walkways in targeted locations (including walking routes to school), but many needs remain.
As noted above, gaps in sidewalk connectivity is one of the most frequently noted issues in the study area. Referring to the Aloha-Reedville Study Existing Conditions report as much as half of the streets in the study area south of Tualatin Valley Highway lack sidewalks. In the northern portion of the study area, which is more recently developed, approximately one fifth of the area lacks sidewalks.

Many of the gaps in sidewalks occur along neighborhood streets. Other than through redevelopment or Minor Betterment / URMD Safety projects or CBDG grants there are few additional funding programs to construct needed sidewalks or paths. These funds are applied across all urban unincorporated areas of the county and provide intermittent improvements, generally on a small scale.

More substantial sidewalk (and bike lane) improvements occur with major street (collector and arterial) reconstruction. However those improvements are funded primarily through MSTIP and Transportation Development Taxes (TDT) paid by developers. MSTIP projects compete county-wide for funds and TDT is intended for increased capacity related to development.

Safe Routes to School (SRTS) provided additional funding in the past however the U.S. Department of Transportation has ceased funding the program along with a number of other potential discretionary funding streams that could support implementation. Future funding options will compete with a wider variety of transportation needs.

In the face of these funding challenges, county staff have collaborated with Beaverton School District (BSD) and Hillsboro School District (HSD) staff and school principals to develop a list of top tier sidewalk infill projects that would address the most critical gaps near schools. Building on school district and parent knowledge of walkway needs, county staff used geographic information systems (GIS) to identify, quantify and prioritize sidewalk and connectivity needs near the 12 schools in the study area. Intent moving forward would be to “bundle” these projects into a package and seek federal, state and other grant funding to leverage county transportation dollars. The technical process for identifying projects unfolded in four steps, described below.

Project Identification and Prioritization – Step 1

The initial technical process, which resulted in a list of 99 projects, included the following:

- County GIS staff modeled the pedestrian network for the entire Aloha-Reedville study area, consisting of road sides with sidewalk presence/absence information, crossings, trails, accessways, and selected shortcuts through parks and parking lots.

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1 Aloha-Reedville Study and Livable Community Plan, Existing Conditions Report, Appendix 5, Transportation, June 11, 2012 pages 30 and 31 – Sidewalk Facility Inventory.
2 http://www.saferoutesinfo.org/about-us/newsroom/response-map-21
The ESRI ArcGIS Network Analyst function identified “walksheds” – places within ¼ mile network distance of an elementary school access point, or within ½ mile network distance of a middle, high or K-8 school access point. (General school district policy is to not provide bus service to students within one mile of elementary schools and within one and a half mile of middle and high schools unless a “hazard” is present. For the purposes of this effort, ¼ and ½ mile walksheds were used to focus on locations with a higher level of pedestrian usage due to the dendritic (tree-like) pattern of walking routes that converge near schools.

Within these walksheds, road side segments were selected on which:
- There are no sidewalks/walkways on either side of the street, or it is inconvenient or difficult to cross to an existing sidewalk/walkway on the other side of the street;
- The functional class is Neighborhood Route, Collector or Arterial (most Local Streets in Aloha-Reedville do not have sufficient volumes or speeds to warrant sidewalk retrofits);
- It is unlikely that the adjacent property would redevelop in the near future, triggering sidewalk construction.

Certain sidewalk gaps on arterials/collectors were characterized as major “complete street” projects that would be addressed through a large scale capital project funded by the Major Streets Transportation Improvement Program (MSTIP) or other source of similar scale.

In addition to identifying sidewalk gaps, a handful of other potential active transportation projects were identified that would benefit walking or biking to school. These included:
- Accessways (short bike/ped connections) between streets, schools and parks;
- Regional trail segments, such as the Reedville Trail;
- Crosswalks (both simple marked crosswalks as well as “enhanced” crossings that would potentially include traffic signals and refuge islands);
- Traffic control changes, such as installing a four-way stop;
- Bike lanes;
- Neighborhood bikeways (low traffic streets designated for cycling)

Additional projects were added in consultation with school district staff and by reviewing BSD’s *Walk/Bike Routes to School* maps and Parent Survey Summary, HSD’s *Suggested Walk Paths* maps, and both districts’ “hazard” maps. Some of these projects are located greater than ¼ or ½ mile from a school, but were identified as important projects by school district staff.

The initial list of projects, totaling 99, are listed below, sorted by school name alphabetically.

* Asterisks denote projects that benefit more than one school, in whole or in part.
† Crosses denote projects that are located outside the ¼-mile or ½-mile buffers, in their entireties.
Aloha High School (BSD)

- Complete street upgrade to Kinnaman Rd, 198th – 185th*
- Complete street upgrade (4-lane boulevard) to 185th Ave, Kinnaman – Farmington
- Complete street upgrade (4-lane boulevard) of Farmington Rd, 198th – Kinnaman (currently ODOT jurisdiction)* †
- Sidewalk on 188th Ave, Blanton – Kinnaman, side to be determined*
- Sidewalk on north side of Madeline St, 192nd Ave – Aloha HS frontage
- Sidewalk on north side of Madeline St, 180th – 185th
- Sidewalk on south side of Rosa Rd, 18811 – 183rd Ave*
- Sidewalk on east side of 185th Ave, Farmington Rd – Burnside Park – portion near Farmington to be built by Walgreens
- Pedestrian safety improvements at TV Hwy / 185th – funded ODOT safety project, 2014-15
- Marked crosswalk on Kinnaman Rd at 188th Ave
- Accessway from 189th Ave cul-de-sac to Madeline St
- Accessway from Jaylee St / 189th Ave to Aloha HS through county property
- Accessway from 188th Pl to Jaylee St / 189th Ave
- Accessway from Butternut St to Kinnaman Rd by Housing Authority properties

Aloha-Huber Park School (BSD)

- Sidewalk on south side of Florence St, 175th – 170th
- Sidewalk on south side of Florence St, 170th – 165th
- Sidewalk on north side of Farmington Rd, 173rd – 170th
- Sidewalk on east side of 175th Ave, Blanton – Florence
- Sidewalk on west side of 175th Ave, Florence – Chris
- Marked crosswalks at 173rd & Florence (west side, south side of intersection)
- Marked crosswalk at 173rd & Chris (north side of intersection)
- Marked crosswalk at Blanton & 173rd (west side of intersection)
- Enhanced crossing of 170th at Pauline La (RRFB or full signal)
- Enhanced crossing of 170th at Florence St (RRFB or full signal)
- Accessway connecting 163rd Ave, Shelton St, Ludwig St†
- Four-way stop at 173rd & Florence
- Three-way stop at 173rd & Chris

Beaver Acres Elementary School (BSD)

- Complete street upgrade to 170th Ave, Merlo Rd to Alexander St, potentially including two-way cycle track.
- Crossings at Augusta La and/or Vendla Park La
- Ped/bike bridge and accessway over Beaverton Creek at Augusta La
- Ped/bike bridge and accessway over Beaverton Creek at Pheasant Dr‡
- Sidewalk on Augusta La, Pheasant La – Chatelain Dr, side to be determined
- Shoulder and line-of-sight improvements on Pheasant La, 185th Ave – Augusta La
Butternut Creek Elementary School (HSD)

- Complete street upgrade to 198th Ave, TV Hwy to Farmington – *partially funded MSTIP 3d project 2018-2019*
- Complete street upgrade to Kinnaman Rd, 209th – 198th
- Complete street upgrade to 209th Ave (four-lane boulevard), TV Hwy – Farmington
- Sidewalk on north side of Florence St, Stoddard – school grounds (+ move crosswalk of Stoddard to north side of intersection)
- Marked crosswalk of Kinnaman Rd at 202nd Ave
- Enhanced crossing of 198th Ave at Southview St (RRFB)
- Intersection safety improvement at 202nd Ave and Southview St (4-way stop, raised intersection or other improvement)
- ADA improvements at Jaylee St barrier
- Safety and surface improvements to existing pathway from Jaylee St to south side of school

Elmonica Elementary School (BSD)

- Lighting and safety improvements to fire lane between Williamsburg Way and Hurrel La†
- Lighting and safety improvements to accessway between Williamsburg Way and Pacifica Ct†
- Future street connection: 175th Ave, Nazaneen – Clearwater – *upon redevelopment†*

Hazeldale Elementary School (BSD)

- Complete street upgrade (4-lane boulevard) of Farmington Road, 198th – Kinnaman (currently ODOT jurisdiction)*
- Sidewalk on east side of Miller Hill Rd, Wagner La to Georgene La
- Enhanced crossing (full signal) of Farmington Rd at Miller Hill Rd
- Complete street upgrade to 198th Ave, TV Hwy to Farmington – *partially funded MSTIP 3d project 2018-2019*
- Future street connection: Marlin Dr to 196th Terr – *upon redevelopment; required street connection in Local Street Connectivity Lands (Ordinance 552)*
- Future street connections: Connect two segments of Crisp Dr – *upon development†*
- Future street connections to Miller Hill Rd from Quarry Dr, Applegate Dr, Quarry Dr, Charles Ct - *upon redevelopment; required street connections in Local Street Connectivity Lands (Ordinance 552)†*

Indian Hills Elementary School (HSD)

- Complete street upgrade of 197th/198th Aves, Baseline – Johnson*†
- Sidewalk on south side of Rock Rd, Cornelius Pass Rd – 1715 SW Rock Court – *recommended Minor Betterment project 2014-2015* *
- Sidewalk on 216th Ave, Rock Rd – Peggy Ct, side to be determined *
- Sidewalk on south side of Rock Rd, 203rd – 197th*†
- Marked crosswalk of Rock Rd at 214th Ave
- Reedville Trail, Rock Rd – Augusta St, including lighting*
- Reedville Trail, Jay St – Susan La / 214th Ave, including lighting*
- Resurface existing path from Anthony Dr to school
Future street connection from 199th Ct to 197th Ave – *included in TSP, would be provided by development*

**International School (BSD)**

- Sidewalk along east side of 180th Ave, Vincent – Kinnaman
- Accessway from Vincent & 180th through Arnold Park to school
- At-grade pedestrian crossing of railroad at 178th Ave, railroad fencing
- Neighborhood bikeway on 178th/179th/180th Aves, Augusta La to Bany Rd*

**Kinnaman Elementary School (BSD)**

- Complete street upgrade to Kinnaman Rd, 198th – 185th*
- Sidewalk on west side of 193rd Ave, Blanton St to school property line.
- Sidewalk on south side of Blanton St, 193rd – 185th
- Sidewalk on east or west side of 191st Ave, Kinnaman – Anderson
- Sidewalk on east or west side of 192nd Ave, Anderson – Rosa†
- Sidewalk on west side of 188th Ave, Blanton – Kinnaman†

**L.C. Tobias Elementary School (HSD)**

- Complete street upgrade of 197th/198th Aves, Baseline – Johnson†
- Bike lanes on 206th Ave, Baseline – Rock
- Accessway connections from 211th Pl and 211th Ave to school
- Marked crosswalk on 206th Ave at Brackenwood La
- Traffic signal at Baseline Rd & 201st Ave – *conditioned in Baseline Woods development†*
- Future street connection from 213th Ave to 211th Ave and Brackenwood La – *included in TSP, would be provided by development†*

**Ladd Acres Elementary School (HSD, across street from study area)**

- Across Cornelius Pass Rd from study area; no students from study area attend.

**Mountain View Middle School (BSD)**

- Complete street upgrade (4-lane boulevard) of Farmington Rd, 198th – Kinnaman (currently ODOT jurisdiction)*
- Complete street upgrade to Kinnaman Rd, 198th – 185th*
- East side crosswalk, left turn signal phase at existing Farmington Rd signal between school and Farmington Center shopping center
- Realignment, signalization and ped/bike crossing enhancements at Farmington/Rosa/179th
- Sidewalk on east side of 179th Ave, Farmington – Ivy Glen
- Sidewalk on south side of Rosa Road, 18811 – 183rd Ave*
- Improved accessways connecting school with Wright St and 170th Ave through new community park
- Accessway through future southwest park site along Oak St alignment between 182nd Ter and 179th Ave
• Neighborhood bikeway on 178th/179th/180th Aves, Augusta La to Bany Rd*

R.A. Brown Middle School (HSD, across street from study area)

• Complete street upgrade of 197th/198th Aves, Baseline – Johnson*†
• Sidewalk on south side of Rock Road, Cornelius Pass Rd – 1715 SW Rock Court – recommended Minor Betterment project 2014-2015*
• Sidewalk on 216th Ave, Rock Rd – Peggy Ct, side to be determined*
• Reedville Trail, Rock Rd – Augusta St, including lighting*
• Reedville Trail, Jay St – Susan La/214th Ave, including lighting*
• Signal phase modification (lengthen ped crossing time) at Cornelius Pass Rd and Frances St
• Future street connection from 199th Ct to 197th Ave – included in TSP, would be provided by development†

Reedville Elementary School (HSD)

• Better definition of walking space on paved school frontages and Reedville Presbyterian Church frontage
• Improved / better maintained accessway through Intel Aloha Wetlands on Clarion St
• Walkway along Johnson St, 198th – 209th, side to be determined
• Sidewalk infill on Alexander St, 209th – 198th, side to be determined. Sidewalk along south side of Alexander immediately east of 209th may be accomplished through redevelopment.
• Cut back plant growth along sidewalk on west side of 209th Ave, Alexander – Alexander
• Neighborhood bikeway on Drake/Alexander/Johnson, Brookwood to 170th
• Bike lanes or wide shoulders on 209th Ave, Alexander – Johnson

Project Identification and Prioritization – Step 2

The next step in narrowing the project list was to focus on those projects that could be implemented by Washington County LUT on county facilities or rights-of-way, that the school districts would support, and that are of a small to moderate scale. Projects were usually eliminated if they had one or more of the following characteristics3:

• The project is funded or under construction.

• The project is located on private property or within non-county road right-of-way. This eliminated projects on state facilities such as Farmington Road, as well as connectivity projects through undeveloped private properties, school properties and park land. Some of these projects may be accomplished through other means, including redevelopment or park and trail projects.

3Projects that were eliminated still have considerable value, and several are recommended under other action items in the Aloha-Reedville plan, including Accessways, Regional Trails, Neighborhood Bikeways and Major Street Transportation Projects. Some of these projects were tested in step 3. The initial list of 99 projects should be kept as a resource for future project ideas.
The project would best be accomplished as part of a major roadway reconstruction project funded through MSTIP or a program of similar scale. Examples include Kinnaman Road and 170\textsuperscript{th} Avenue, which are recommended in a different section of the Aloha-Reedville plan.

The project is a bike lane or neighborhood bikeway project. These projects are of a somewhat larger scale and are being planned under separate efforts, including the Washington County Neighborhood Bikeways Plan.

The project did not meet engineering warrants. For example, four-way stops are generally not recommended in cases where intersecting traffic volumes are imbalanced.

The project is exceptionally far from the intended ¼- and ½-mile focus areas.

The project would not meet school district policies for walking to school, including the policy to not endorse students crossing a five-lane roadway, even if a traffic signal would be provided. This eliminated a pair of enhanced crossing projects on 170\textsuperscript{th} Avenue near Aloha-Huber School.

The resulting list of projects totaled 46. These projects were further consolidated into 39 projects and are listed under Step 3 below.

Project Identification and Prioritization – Step 3

The final analysis phase involved GIS modeling of potential demand, using the Network Analyst tool along with a housing unit shapefile (including the number of units within multi-family properties). As a preprocessing step, several of the projects from the step 2 list were bundled into packages for modeling purposes. For example, a sidewalk on 188\textsuperscript{th} Avenue was bundled with an adjacent crosswalk at Kinnaman and 188\textsuperscript{th} Avenue. Bundling resulted in 39 projects for testing. Among these are a small number of projects that had met the elimination criteria in step 2 but were “kept alive” in order to measure their potential benefit for future consideration. Examples include the enhanced crossings of five-lane 170\textsuperscript{th} Avenue near Aloha-Huber School and the accessways behind L.C. Tobias School.

For each project, the Network Analyst function calculated the number of housing units whose occupants would use the facility as part of the most direct walking route to school. Staff chose not to consider the actual locations of current students’ homes, nor the average number of students per household. This decision was based on the assumption that over the long term, the location of school students will change; that all homes have a potential for housing school children; and that even homes without children will benefit from improved access to schools because schools typically host recreational facilities, lawns, meeting space, and other amenities available to the public during off hours.

In some cases, such as 188\textsuperscript{th} Avenue between Blanton Street and Kinnaman Road, a project was tested twice because it would provide benefit for two schools (in this case Aloha High School
and Kinnaman Elementary School). Some fine tuning was necessary to make sure the model was routing students on the side of the street that includes the proposed facility, and not on the side of the street that would remain without sidewalks. The table below shows the results of the analysis, including cost estimates developed in consultation with county engineering staff and private consultants.
### Table 1: Sidewalk/Connectivity Projects Tested for Potential Walking Demand

<table>
<thead>
<tr>
<th>ID</th>
<th>School</th>
<th>District</th>
<th>Project</th>
<th>Length (ft)</th>
<th>Cost Estimate ($)</th>
<th>Housing Units Served</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-4</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Sidewalk on 188&lt;sup&gt;th&lt;/sup&gt; Ave, Blanton – Kinnaman, side to be determined; marked crosswalk on Kinnaman Rd at 188th Ave</td>
<td>1,640</td>
<td>324,358</td>
<td>346</td>
<td>Two schools benefit. Serves 327 HHs for Aloha HS; 238 HHs for Kinnaman ES (areas overlap). Crosswalk does not add HHs. BSD priority.</td>
</tr>
<tr>
<td>A-5</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Sidewalk on north side of Madeline St, 192&lt;sup&gt;nd&lt;/sup&gt; Ave – Aloha HS frontage</td>
<td>885</td>
<td>173,416</td>
<td>692</td>
<td>Fewer HHs served if project A-8 is completed</td>
</tr>
<tr>
<td>A-6</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Sidewalk on north side of Madeline St, 180&lt;sup&gt;th&lt;/sup&gt; – 185&lt;sup&gt;th&lt;/sup&gt;</td>
<td>953</td>
<td>186,740</td>
<td>310</td>
<td></td>
</tr>
<tr>
<td>A-7</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Sidewalk on south side of Rosa Rd 18811 – 183rd Ave</td>
<td>1,090</td>
<td>213,586</td>
<td>845</td>
<td>Two schools benefit. Serves 510 HHs for Aloha HS; 371 HHs for Mountain View MS (areas overlap).</td>
</tr>
<tr>
<td>A-8</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Sidewalk on east side of 185th Ave, Farmington Rd – Burnsridge Park – portion near Farmington to be built by Walgreens</td>
<td>276</td>
<td>54,082</td>
<td>280</td>
<td></td>
</tr>
<tr>
<td>A-11</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Accessway from 189&lt;sup&gt;th&lt;/sup&gt; Ave cul-de-sac to Madeline St</td>
<td>156</td>
<td>59,015</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>A-12</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Accessway from Jaylee St / 189&lt;sup&gt;th&lt;/sup&gt; Ave to Aloha HS through county and school property</td>
<td>430</td>
<td>275,028</td>
<td>195</td>
<td>Includes a segment on school property. Tested to determine benefit.</td>
</tr>
<tr>
<td>A-13</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Accessway from 188&lt;sup&gt;th&lt;/sup&gt; Pl to Jaylee St / 189&lt;sup&gt;th&lt;/sup&gt; Ave</td>
<td>201</td>
<td>76,038</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>A-14</td>
<td>Aloha HS</td>
<td>Beaverton</td>
<td>Accessway from Butternut St to Kinnaman Rd by Housing Authority properties</td>
<td>215</td>
<td>81,335</td>
<td>60</td>
<td>On HOA property. Tested to determine benefit.</td>
</tr>
<tr>
<td>AH-1</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Sidewalk on south side of Florence St, 175&lt;sup&gt;th&lt;/sup&gt; – 170th; marked crosswalks at 173rd &amp; Florence</td>
<td>1,004</td>
<td>202,734</td>
<td>54</td>
<td>Couple with AH-4 to provide seamless sidewalk route to school.</td>
</tr>
<tr>
<td>AH-2</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Sidewalk on south side of Florence St, 170&lt;sup&gt;th&lt;/sup&gt; – 165&lt;sup&gt;th&lt;/sup&gt;</td>
<td>1,170</td>
<td>229,262</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>AH-3</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Sidewalk on north side of Farmington Rd, 173&lt;sup&gt;rd&lt;/sup&gt; – 170&lt;sup&gt;th&lt;/sup&gt;</td>
<td>597</td>
<td>116,982</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>AH-4</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Sidewalk on east side of 175th Ave, Blanton – Florence</td>
<td>1,130</td>
<td>221,424</td>
<td>356</td>
<td>Need to couple with AH-1 in order to provide a seamless sidewalk route to school. BSD priority.</td>
</tr>
<tr>
<td>AH-5</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Sidewalk on west side of 175th Ave, Florence – Chris</td>
<td>541</td>
<td>106,009</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>AH-7</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Marked crosswalk at 173&lt;sup&gt;rd&lt;/sup&gt; &amp; Chris (north side of intersection)</td>
<td>60</td>
<td>3,000</td>
<td>534</td>
<td></td>
</tr>
<tr>
<td>AH-8</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Marked crosswalk at Blanton &amp; 173&lt;sup&gt;rd&lt;/sup&gt; (west side of intersection)</td>
<td>50</td>
<td>3,000</td>
<td>341</td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>School</td>
<td>District</td>
<td>Project</td>
<td>Length (ft)</td>
<td>Cost Estimate</td>
<td>Housing Units Served</td>
<td>Notes</td>
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<tr>
<td>AH-9</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Enhanced crossing of 170th at Pauline La (RRFB or full signal)</td>
<td>90</td>
<td>$342,300</td>
<td>1140</td>
<td>Crossing of 5-lane roads not endorsed by school district. Tested to determine benefit.</td>
</tr>
<tr>
<td>AH-10</td>
<td>Aloha-Huber K-8</td>
<td>Beaverton</td>
<td>Enhanced crossing of 170th at Florence St (RRFB or full signal)</td>
<td>90</td>
<td>$342,300</td>
<td>534</td>
<td>Crossing of 5-lane roads not endorsed by school district. Tested to determine benefit.</td>
</tr>
<tr>
<td>BA-2</td>
<td>Beaver Acres ES</td>
<td>Beaverton</td>
<td>Ped/bike bridge and accessway over Beaverton Creek at Augusta La, plus sidewalk infill on Augusta La</td>
<td>523</td>
<td>$1,497,000</td>
<td>1293</td>
<td>BSD #1 priority. HIA funded.</td>
</tr>
<tr>
<td>BA-5</td>
<td>Beaver Acres ES</td>
<td>Beaverton</td>
<td>Shoulder and line-of-sight improvements on Pheasant La, 185th Ave – Augusta La</td>
<td>3,386</td>
<td>$598,205</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>BC-4</td>
<td>Butternut Creek ES</td>
<td>Hillsboro</td>
<td>Sidewalk on north side of Florence St, Stoddard – school grounds (+ move crosswalk of Stoddard to north side of intersection)</td>
<td>289</td>
<td>$59,630</td>
<td>16</td>
<td>HSD recommendation.</td>
</tr>
<tr>
<td>BC-5</td>
<td>Butternut Creek ES</td>
<td>Hillsboro</td>
<td>Marked crosswalk of Kinnaman Rd at 202nd Ave</td>
<td>60</td>
<td>$3,000</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>BC-6</td>
<td>Butternut Creek ES</td>
<td>Hillsboro</td>
<td>Enhanced crossing of 198th Ave at Southview St (RRFB)</td>
<td>65</td>
<td>$166,000</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>BC-7</td>
<td>Butternut Creek ES</td>
<td>Hillsboro</td>
<td>Intersection safety improvement at 202nd Ave and Southview St (raised intersection or other improvement)</td>
<td>60</td>
<td>$3,000</td>
<td>194</td>
<td></td>
</tr>
<tr>
<td>E-1</td>
<td>Elmonica ES</td>
<td>Beaverton</td>
<td>Lighting and safety improvements to fire lane between Williamsburg Way and Hurrel La†</td>
<td>385</td>
<td>$145,646</td>
<td>298</td>
<td>Not county jurisdiction, tested to determine benefit.</td>
</tr>
<tr>
<td>E-2</td>
<td>Elmonica ES</td>
<td>Beaverton</td>
<td>Lighting and safety improvements to accessway between Williamsburg Way and Pacifica Ct†</td>
<td>309</td>
<td>$116,895</td>
<td>298</td>
<td>Not county jurisdiction, tested to determine benefit.</td>
</tr>
<tr>
<td>H-2</td>
<td>Hazeldale ES</td>
<td>Beaverton</td>
<td>Sidewalk on east side of Miller Hill Rd, Wagner La to Georgene La</td>
<td>825</td>
<td>$368,012</td>
<td>97</td>
<td>Added ROW cost for 15’ strip to get half-street for a 2-lane collector (proposed FC upgrade in TSP)</td>
</tr>
<tr>
<td>IH-3</td>
<td>Indian Hills ES</td>
<td>Hillsboro</td>
<td>Sidewalk on 216th Ave, Rock Rd – Peggy Ct, side to be determined*</td>
<td>953</td>
<td>$186,740</td>
<td>203</td>
<td>Two schools benefit. Serves 64 HHs for Indian Hills ES; 153 HHs for RA Brown MS (areas overlap).</td>
</tr>
<tr>
<td>IH-4</td>
<td>Indian Hills ES</td>
<td>Hillsboro</td>
<td>Sidewalk on south side of Rock Rd, 203rd – 197th†</td>
<td>1,110</td>
<td>$217,505</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>IH-5</td>
<td>Indian Hills ES</td>
<td>Hillsboro</td>
<td>Marked crosswalk of Rock Rd at 214th Ave</td>
<td>50</td>
<td>$3,000</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>IS-1</td>
<td>International School</td>
<td>Beaverton</td>
<td>Sidewalk along east side of 180th Ave, Vincent – Kinnaman</td>
<td>890</td>
<td>$174,396</td>
<td>781</td>
<td></td>
</tr>
<tr>
<td>K-2</td>
<td>Kinnaman ES</td>
<td>Beaverton</td>
<td>Sidewalk on west side of 193rd Ave, Blanton St to school property line.</td>
<td>385</td>
<td>$75,441</td>
<td>309</td>
<td>Couple with K-3 to provide seamless sidewalk route to school.</td>
</tr>
<tr>
<td>ID</td>
<td>School</td>
<td>District</td>
<td>Project</td>
<td>Length (ft)</td>
<td>Cost Estimate</td>
<td>Housing Units Served</td>
<td>Notes</td>
</tr>
<tr>
<td>----</td>
<td>-----------------------</td>
<td>--------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------</td>
<td>---------------</td>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>K-3</td>
<td>Kinnaman ES</td>
<td>Beaverton</td>
<td>Sidewalk on south side of Blanton St, 193rd – 185th</td>
<td>1,575</td>
<td>$308,621</td>
<td>254</td>
<td>Need to couple with K-2 in order to provide seamless sidewalk route to school.</td>
</tr>
<tr>
<td>K-4</td>
<td>Kinnaman ES</td>
<td>Beaverton</td>
<td>Sidewalk on east or west side of 191st Ave,</td>
<td>878</td>
<td>$172,044</td>
<td>381</td>
<td>Sidewalk on Kinnaman needed to make the final connection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kinnaman – Anderson</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC-3</td>
<td>L.C. Tobias ES</td>
<td>Hillsboro</td>
<td>Accessway connections from 211th Pl and 211th Ave to school</td>
<td>1,119</td>
<td>$423,318</td>
<td>96</td>
<td>Not county jurisdiction, tested to determine benefit.</td>
</tr>
<tr>
<td>MV-5</td>
<td>Mountain View MS</td>
<td>Beaverton</td>
<td>Sidewalk on east side of 179th Ave, Farmington – Ivy Glen</td>
<td>1,185</td>
<td>$232,201</td>
<td>474</td>
<td></td>
</tr>
<tr>
<td>R-3</td>
<td>Reedville ES</td>
<td>Hillsboro</td>
<td>Walkway along Johnson St, 198th – 209th, side to be determined</td>
<td>2,321</td>
<td>$454,800</td>
<td>87</td>
<td>Sidewalk along south side of Alexander immediately east of 209th may be accomplished through redevelopment.</td>
</tr>
<tr>
<td>R-4</td>
<td>Reedville ES</td>
<td>Hillsboro</td>
<td>Sidewalk infill along Alexander St, 209th – 198th, side to be determined</td>
<td>850</td>
<td>$166,558</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>R-7</td>
<td>Reedville ES</td>
<td>Hillsboro</td>
<td>Bike lanes or wide shoulders on 209th Ave,</td>
<td>995</td>
<td>$351,573</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>
Project Identification and Prioritization – Step 4

Initial intent leading into the sidewalk gap analysis was to find for each school the one sidewalk or connectivity project that showed the highest potential walking demand. However, further analysis revealed that two schools – Elmonica Elementary School in BSD and L.C. Tobias School in HSD – exist in neighborhoods with relatively complete sidewalk networks, and that alternative projects for these schools are not feasible because they would be located on private property.

Oppositely, other schools exhibited a need for more than one project – either because the projects were complementary in providing a seamless walking route to school, or because one project showed the highest potential demand while another project was the highest priority for school district staff.

In yet other cases, some schools only had one project remaining after the initial elimination round, making the choice easier.

The recommended list of sidewalk and connectivity projects, after bundling several crosswalks with nearby sidewalk projects, includes 13 projects, shown in Table 2 below. Cost estimates have been rounded to the nearest thousand.
### Table 2: Recommended Sidewalk and Connectivity Projects Serving Schools

<table>
<thead>
<tr>
<th>ID</th>
<th>Project</th>
<th>School(s) Served</th>
<th>Housing Units Served</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-4</td>
<td>Sidewalk on 188&lt;sup&gt;th&lt;/sup&gt; Ave, Blanton – Kinnaman, side to be determined; marked crosswalk on Kinnaman Rd at 188th Ave</td>
<td>Aloha HS (BSD), Kinnaman ES (BSD)</td>
<td>346 (327 for AHS, 238 for KES)</td>
<td>$ 325,000</td>
</tr>
<tr>
<td>A-7</td>
<td>Sidewalk on south side of Rosa Rd 18811 – 183rd Ave</td>
<td>Aloha HS (BSD), Mountain View MS (BSD)</td>
<td>845 (510 for AHS, 371 for MVMS)</td>
<td>$ 214,000</td>
</tr>
<tr>
<td>AH-1</td>
<td>Sidewalk on south side of Florence St, 175&lt;sup&gt;th&lt;/sup&gt; – 170th; marked crosswalks at 173rd &amp; Florence</td>
<td>Aloha-Huber K-8 (BSD)</td>
<td>54</td>
<td>$ 203,000</td>
</tr>
<tr>
<td>AH-4</td>
<td>Sidewalk on east side of 175th Ave, Blanton – Florence</td>
<td>Aloha-Huber K-8 (BSD)</td>
<td>356</td>
<td>$ 221,000</td>
</tr>
<tr>
<td>BA-2</td>
<td>Ped/bike bridge and accessway over Beaverton Creek at Augusta La, plus sidewalk infill on Augusta La</td>
<td>Beaver Acres ES (BSD)</td>
<td>1293</td>
<td>$ 1,497,000</td>
</tr>
<tr>
<td>BC-5</td>
<td>Marked crosswalk of Kinnaman Rd at 202&lt;sup&gt;nd&lt;/sup&gt; Ave</td>
<td>Butternut Creek ES (HSD)</td>
<td>96</td>
<td>$ 3,000</td>
</tr>
<tr>
<td>H-2</td>
<td>Sidewalk on east side of Miller Hill Rd, Wagner La to Georgene La</td>
<td>Hazeldale ES (BSD)</td>
<td>97</td>
<td>$ 368,000</td>
</tr>
<tr>
<td>IH-3</td>
<td>Sidewalk on 216th Ave, Rock Rd – Peggy Ct, side to be determined*</td>
<td>Indian Hills ES (HSD)</td>
<td>203</td>
<td>$ 187,000</td>
</tr>
<tr>
<td>IS-1</td>
<td>Sidewalk along east side of 180&lt;sup&gt;th&lt;/sup&gt; Ave, Vincent – Kinnaman</td>
<td>International School (BSD)</td>
<td>781</td>
<td>$ 175,000</td>
</tr>
<tr>
<td>K-2</td>
<td>Sidewalk on west side of 193&lt;sup&gt;rd&lt;/sup&gt; Ave, Blanton St to school property line</td>
<td>Kinnaman ES (BSD)</td>
<td>309</td>
<td>$ 75,000</td>
</tr>
<tr>
<td>K-3</td>
<td>Sidewalk on south side of Blanton St, 193&lt;sup&gt;rd&lt;/sup&gt; – 185&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Kinnaman ES (BSD)</td>
<td>254</td>
<td>$ 309,000</td>
</tr>
<tr>
<td>MV-5</td>
<td>Sidewalk on east side of 179&lt;sup&gt;th&lt;/sup&gt; Ave, Farmington – Ivy Glen</td>
<td>Mountain View MS (BSD)</td>
<td>474</td>
<td>$ 232,000</td>
</tr>
<tr>
<td>R-3</td>
<td>Walkway along Johnson St, 198&lt;sup&gt;th&lt;/sup&gt; – 209&lt;sup&gt;th&lt;/sup&gt;, side to be determined</td>
<td>Reedville ES (HSD)</td>
<td>87</td>
<td>$ 455,000</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>$ 4,264,000</strong></td>
</tr>
</tbody>
</table>
Applicable Performance Measures

*Project Goal 1*: Community Plan with broad community support

*Project Goal 2*: Streetscape improvements

*Community Values*: Safety, Health, Quality of Life

*Community Vision Statements*: Efficient Roadways, Alternative to Car, Housing, Attractive Community

*SMART*: Specific, Measurable, Attainable, Realistic, Time Bound

*Deliverables*: Bicycle and Pedestrian Plan

*Compatible with other planning efforts*:

Implementation Timeline

Near term. Funding will be sought immediately; construction could begin within one to five years.